

Application No.: 10/025,906
Supplemental Amendment dated July 22, 2004

Docket No.: 8733.527.00-US

Listing of the Claims:

1. (Previously Presented) A method of driving a liquid crystal display, comprising:
sequentially supplying a first scanning signal to consecutive ones of a plurality of gate lines;
sequentially supplying a second scanning signal to consecutive ones of the plurality of gate lines, wherein at least one gate line is between a gate line supplied with the first scanning signal and a gate line supplied with the second scanning signal; and
supplying data synchronized with said first scanning signal and said second scanning signal to a plurality of data lines crossing with the plurality of gate lines.
2. (Previously Presented) The method according to claim 1, wherein said first scanning signal and said second scanning signal are alternately supplied to the plurality of gate lines.
3. (Original) The method according to claim 1, further comprising:
supplying picture data to the plurality of said data lines in synchronization with said first scanning signal; and
supplying black data to the plurality of said data lines in synchronization with said second scanning signal.
4. (Original) The method according to claim 1, further comprising:
supplying picture data to the plurality of said data lines in synchronization with said second scanning signal; and

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supplying black data to the plurality of said data lines in synchronization with said first scanning signal.

5. (Previously Presented) A liquid crystal display, comprising:
- a liquid crystal display panel wherein a plurality of liquid crystal cells are arranged in a matrix;
 - a plurality of gate lines in said liquid crystal display panel;
 - a plurality of data lines crossing with the plurality of said gate lines;
 - a gate driver sequentially scanning said plurality of gate lines, said scanning including sequentially supplying a first scanning signal and a second scanning signal to non-adjacent ones of the plurality of said gate lines;
 - a scanning signal supplier supplying said first scanning signal and said second scanning signal to said gate driver; and
 - a data driver supplying data to the plurality of said data lines, wherein the supplied data is synchronized with said first scanning signal and said second scanning signal.

6. (Previously Presented) The liquid crystal display according to claim 5, wherein said gate driver alternately supplies the first scanning signal and said second scanning signal to said gate lines.

7. (Original) The liquid crystal display according to claim 5, wherein said data driver supplies black data to said data line when said first scanning signal is supplied to a first gate line; and

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picture data is supplied when said second scanning signal is supplied to a second gate line, at least one additional gate line between the second gate line and the first gate line.

8. (Previously Presented) The liquid crystal display according to claim 5, wherein said gate driver includes:

a first register sequentially receiving said first scanning signal and said second scanning signal from said scanning signal supplier;

a second register receiving into an i -bit thereof, wherein i is a natural number, the data stored at an i -bit of said first register and transmitting the stored data from the i bit of said second register to an $i+1$ bit of said first register;

a level shifter receiving the data that contain any one of said first scanning signal and said second scanning signal from said first register, and changing a voltage level suitable for driving said liquid crystal display panel; and

an outputter receiving from said level shifter the data of which the voltage level has been changed and supplying to said liquid crystal display panel.

9. (Previously Presented) The liquid crystal display according to claim 8, wherein said scanning signal supplier supplies said second scanning signal to said first register when said first scanning signal is positioned at said second register.

10. (Previously Presented) The liquid crystal display according to claim 5, wherein said gate driver includes:

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a first register sequentially receiving said first scanning signal and said second scanning signal from said scanning signal supplier;

a second shift register receiving into an i -bit thereof, wherein i is a natural number, the data stored at an i -bit of said first register and transmitting the stored data from the i bit of said second register to an $i+1$ bit of said first register;

a level shifter receiving the data that contain any one of said first scanning signal and said second scanning signal from said second register, and changing a voltage level suitable for driving said liquid crystal display panel; and

an outputter receiving from said level shifter the data of which the voltage level has been changed and supplying to said liquid crystal display panel.

11. (Previously Presented) The liquid crystal display according to claim 10, wherein said scanning signal supplier supplies said second scanning signal to said first register when said first scanning signal is positioned at said second register.

12. (Currently Amended) A method of driving a liquid crystal display, comprising:
providing a liquid crystal display panel having a plurality of liquid crystal cells arranged in a matrix;

forming a plurality of gate lines in said liquid crystal display panel;

forming a plurality of data lines crossing with said plurality of gate lines;

providing a scanning signal supplier supplying first and second scanning signals to a gate driver, said gate driver sequentially scanning said gate lines, said scanning including sequentially supplying said first and second scanning signals to non-adjacent ones of said gate lines; and

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supplying data to the plurality of said data lines, wherein the supplied data is synchronized with said first and second scanning signals.

13. (Previously Presented) The method of driving a liquid crystal display according to claim 12, further comprising alternately supplying said first and second scanning signals to said gate lines.

14. (Original) The method of driving a liquid crystal display according to claim 12, further comprising:

using said data driver to supply a black data signal to said data line when said first scanning signal is supplied to one of said gate lines; and

using said data driver to supply a picture data signal when said second scanning signal is supplied to a selected gate line, wherein at least one gate line is provided between said selected gate line and said gate line to which said first scanning signal is supplied.

15. (Previously Presented) The method of driving a liquid crystal display according to claim 12, further comprising:

sequentially receiving said first scanning signal and said second scanning signal from said scanning signal supplier into a first register;

receiving data stored at an i^{th} bit of said first register, wherein i is a natural number, into an i^{th} bit of a second register, and transmitting said received data into an $i^{\text{th}}+1$ bit of said first register;

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receiving any one of said first scanning signal and said second scanning signal from said first register into a level shifter and selecting a voltage suitable for driving said liquid crystal display panel; and

receiving said selected voltage from said level shifter into an outputter and supplying said selected voltage to said liquid display panel.

16. (Previously Presented) The method of driving a liquid crystal display according to claim 15, wherein said second scanning signal is supplied to said first register when said first scanning signal is positioned at said second register.

17. (Previously Presented) The method of driving a liquid crystal display according to claim 12, further comprising:

sequentially receiving said first scanning signal and said second scanning signal from said scanning signal supplier into a first register;

receiving data stored at an i^{th} bit of said first register, wherein i is a natural number, into an i^{th} bit of a second register, and transmitting said received data into an $i^{\text{th}}+1$ bit of said first register;

receiving any one of said first scanning signal and said second scanning signal from said second register into a level shifter and selecting a voltage suitable for driving said liquid crystal display panel; and

receiving said selected voltage from said level shifter into an outputter and supplying said selected voltage to said liquid display panel.

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18. (Previously Presented) The method of driving a liquid crystal display according to claim 17, wherein said second scanning signal is supplied to said first register when said first scanning signal is positioned at said second register.

19. (Currently Amended) A method of driving a liquid crystal display, comprising:
sequentially supplying first and second scanning signals to a plurality of consecutively arranged gate lines in a liquid crystal panel having a plurality of liquid crystal cells arranged in a matrix, wherein at least one gate line is between a gate line supplied with the first scanning signal and a gate line supplied with the second scanning signal; and

supplying data signals to a plurality of data lines, wherein the data signals are synchronized with the first and second scanning signals, and wherein the data lines intersect the gate lines.